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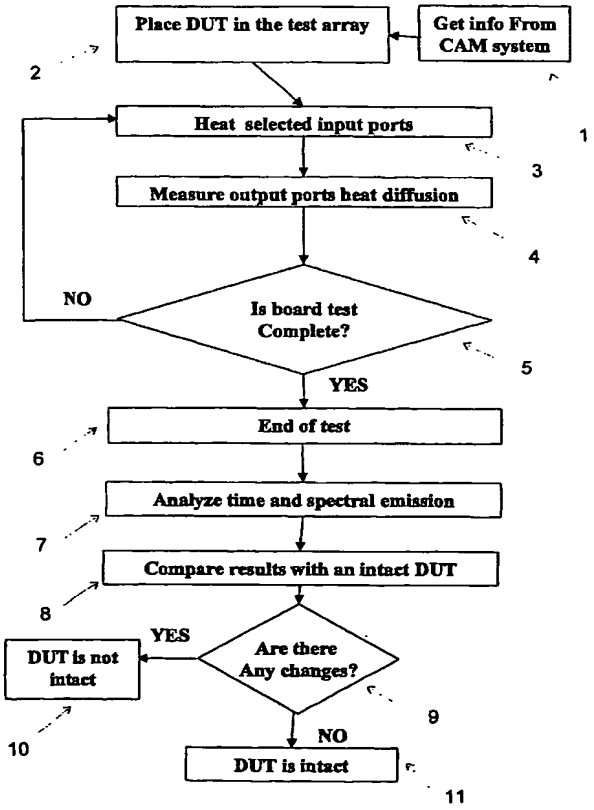
(54) Title: ELECTRIC ULTIMATE DEFECTS ANALYZER DETECTING ALL DEFECTS IN PCB/MCM



(57) **Abstract:** A system for electric testing PCB/MCM before and after assembly. The system uses energy taken from a heating source, timely applied at certain ports of the PCB/MCM (entry ports). The energy is defused through the board inner layer tracks terminating at the end of the channel tracks of the PCB/MCM (exit ports). The rate of energy diffusion on the board is measured at the terminating ports in the time domain. The thermal emission is measured by a spectrometer that conducts infrared scans and analyzes the PCBs energy spectrum. Measurements can be taken as discrete measurements or as integrated measurements. The measurements results are compared with the pre-memorized values of a group of patterns that represent respective golden board. Defect analysis is automatically achieved based on learned defect test patterns.

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